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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,316

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Hermanus Bernardus Maria Lenting

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NIXON & VANDERHYE, PC  
901 NORTH GLEBE ROAD, 11TH FLOOR  
ARLINGTON, VA 22203

EXAMINER

ARIANI, KADE

ART UNIT

PAPER NUMBER

1651

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/533,316	<b>Applicant(s)</b> LENTING, HERMANUS BERNARDUS MARIA	
	<b>Examiner</b> KADE ARIANI	<b>Art Unit</b> 1651	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-13, 15-19, and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-13, 15-19, and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### ***DETAILED ACTION***

The amendment filed on November 07, 2007, has been received and entered.

Claim 14 is cancelled.

Claims 1-9, 11-13, 15-19, and 21 are pending in this application and were examined on their merits.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 11-13, 15-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tzanov et al. (Enzyme and Microbial Technology, 2001, Vol. 29, p.357-362) in view of Lang et al. (US Patent No. 6,258,590 B1, July 2001) and further in view of Ando et al. (Applied & Environmental Microbiology, Jan 2002, Vol. 68, No. 1, p.430-433).

Claims 1-9, 11-13, 15-19 and 21 are drawn to a method (or treating a cellulosic grey fabric) comprising the following steps: (a) a pretreatment step in the presence of water, at a temperature of 80-100°C, the fabric is contacted with a thermostable enzyme which degrades starch; and (b) an integrated desizing and scouring step in which, in the presence of water, at a temperature of 70°C at the most, the fabric as obtained in step (a) is contacted with an enzyme which degrades a polymeric component of the primary

cell wall of cotton and an enzyme which degrades starch, wherein steps (a) and (b) are carried out as continuous process and the fabric is subjected to each step for 5 minutes at the most, the enzyme which degrades starch is an  $\alpha$ -amylase, in step (b) the enzyme is chosen from the group of cellulase, protease and/or pectinase, the pectinase is a polygalacturonate lyase, the presence of a surfactant, pH of 7.5-9.5, a method according to claim 1, wherein the fabric obtained in step (b) is subjected to a washing treatment which is carried out at a temperature of 60-100-°C in the presence of a surfactant, a method wherein between step (b) and the subsequent washing treatment, the fabric is subjected to a treatment in which the mass transport of fabric components to be washed away is promoted, a method wherein the washed fabric is subsequently bleached, a method wherein the fabric is a woven cotton fabric, fabric manufactured according to the method of claim 1, use of a fabric as obtained using the method according to claim 1 for manufacturing textile products, a textile product manufactured from a fabric treated using the method according to claim1.

Applicant's arguments filed on 11/07/2007 have been fully considered but they are not persuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or

motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art.

In this case, Tzanov et al. teach a method to treat woven grey cotton fabrics (p. 357, Col.2, 2<sup>nd</sup> paragraph, Lines 2-3), fabrics are pretreated in the presence of water and a thermostable  $\alpha$ -amylase at 70°C and pH 5.0 (p.358, Material & Methods), fabrics were scoured with an alkaline pectinase at pH 8.0 at 40°C, a polygalactorunase lyase, the presence of a surfactant (p.358, Enzymatic scouring, lines 1-8) an enzymatic desizing-scouring-bleaching process (a continuous process) (p. 361, Col.2, last 3 lines), mass transport of fabric components to be washed as fabrics were removed boiled, fabrics were washed and dried (p.358, Col.1, last paragraph and Col.2 , 1<sup>st</sup> line), fabrics were bleached (p.358, Col. 2, 4<sup>th</sup> paragraph), textile material and textile processing (p. 357, Introduction, Col.2, Lines 12 and 15-16).

Tzanov et al. do not teach 80-100°C, vacuum treatment, and fabric is subjected for 5 minutes at the most. However, Lange et al. teach high temperature scouring of woven cotton fabrics using a thermostable pectinase, at a temperature above 80°C, compatible with textile preparation techniques.

Moreover, at the time the invention was made, at the time the invention was made, thermostable starch hydrolyzing enzymes ( $\alpha$ -amylases), were very well known in the art. Also, drying via vacuum and blowing treatment were clearly very well known in the art.

Furthermore, Ando et al. teach higher temperatures (above 70°C) are preferred for desizing (the step to remove starch from cotton fabrics) and further teach “if the enzymes that are presently used for biopolishing of cotton products are replaced by a

hyperthermostable enzyme with an optimum temperature close to 100°C, the process will be much more simple, quick and efficient than in presently employed method” (see Introduction, 1<sup>st</sup> column, lines 1-).

Therefore, in view of the above teachings, it would have been obvious to one the ordinary skill in the art to modify the method as taught by Tzanov et al. substituting the enzyme with thermostable enzymes as taught by Lange et al. Since at the time the invention was made thermostable  $\alpha$ -amylases were available and being used in the art. The motivation as taught by Ando et al. would be that hyperthermostable enzymes would make the desizing and scouring steps much simpler, quicker and more efficient.

### ***Conclusion***

No claims are allowed.

**THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kade Ariani whose telephone number is (571) 272-6083. The examiner can normally be reached on 9:00 am to 5:30 pm EST Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on (571) 272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Leon B Lankford Jr/  
Primary Examiner, Art Unit 1651

Kade Ariani  
Examiner  
Art Unit 1651

